

1. A modular support system for supporting a bed of filter or compost material through which air or gas is to be passed vertically, with provision for balancing the distribution of gas to be passed through the bed of material, comprising:

(a) a multiplicity of polygonal bed platform modules having generally planar top surfaces and shaped to be arranged side-by-side contiguously to form a bed platform covering a selected area, at least some of the bed platform modules having perforations so as to allow gas to pass through the bed platform,

(b) bed support legs having upper ends connected to bottom sides of the bed platform modules, and of length sufficient to support and elevate the bed platform modules above a base surface on which the support system rests to form a plenum under the bed platform modules,

(c) a peripheral closure along the periphery of the bed platform and generally closing the plenum,

(d) a series of flow distribution platform modules comprising some of the bed platform modules and being arranged contiguously in the bed platform, defining in the plenum a flow distribution channel space beneath the series of flow distribution platform modules,

(e) a gas inlet opening into the plenum and communicating with the flow distribution channel space, and

(f) the flow distribution platform modules having slots in generally vertical planes near left and right sides of the modules, and including slide gates configured to be assembled down into the slots and to hang down into the plenum sufficiently to close off the respective sides of the flow distribution channel space to a desired degree at each side of each flow distribution platform module,

whereby prior to the placement of the bed of filter or compost material on the modular bed platform, air or gas can be directed through the gas inlet and into the plenum, flow of gas through the various perforated bed platform modules can be reviewed, and the slide gates can be placed, adjusted and reconfigured such that optimum balance of flow through the various bed platform modules can be achieved via adjustment of such slide gates and corresponding control of the flow of gas through and out of the sides of the flow distribution channel space.

2. The modular support system of claim 1, wherein the slide gates are formed of molded plastic material, shaped generally as planar blades and including a top flange wider than the slot, for supporting the slide gate against the top of the slot.

3. The modular support system of claim 1, wherein the slide

gates are essentially fully closed near the gas inlet and open to a progressively greater extent remote from the gas inlet along the length of the flow distribution channel space.

5           4. The modular support system of claim 1, wherein the base surface is covered with a sheet of plastic material through which the gas inlet passes, the bed support legs and the peripheral members resting on the plastic sheet, such that the plenum is generally sealed against gas passage except through the  
10 perforations.

          5. The modular support system of claim 1, wherein the flow distribution platform modules are substantially rectangular and have four legs, substantially at corners, the legs having  
15 vertical grooves forming a part of said slots, such that the slide gate slides down through the upper surface of the flow distribution platform module in said slot and is guided and generally retained by the grooves in the legs.

20           6. The modular support system of claim 1, wherein the bed platform modules and flow distribution platform modules are formed of rotocast plastic material.

          7. A modular support system for supporting a bed of filter

or compost material through which air or gas is to be passed vertically, with provision for balancing the distribution of gas to be passed through the bed of material, comprising:

5 (a) a multiplicity of polygonal bed platform modules having generally planar top surfaces and shaped to be arranged side-by-side contiguously to form a bed platform covering a selected area, at least some of the bed platform modules having perforations so as to allow gas to pass through the bed platform,

10 (b) bed support legs having upper ends connected to bottom sides of the bed platform modules, and of length sufficient to support and elevate the bed platform modules above a base surface on which the support system rests to form a plenum under the bed platform modules,

15 (c) an edge closure along the periphery of the bed platform and generally closing the plenum,

20 (d) a series of flow distribution platform modules comprising some of the bed platform modules and being arranged contiguously in the bed platform, defining in the plenum a flow distribution channel space beneath the series of flow distribution platform modules,

(e) a gas inlet opening into the plenum and communicating with the flow distribution channel space, and

(f) the flow distribution platform modules having adjustable means for closing, to a desired degree, the flow distribution

channel space from the rest of the plenum at sides of the flow distribution platform modules, so that gas entering at the inlet opening can be directed as desired to balance the flow of gas throughout the support system.

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8. The modular support system of claim 7, wherein the closure means includes manual means for adjusting the degree of closure at each side of each flow distribution platform module from above the modular support system once erected.

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9. The modular support system of claim 8, wherein the closure means comprises slots arranged in generally vertical plains near left and right sides of the flow distribution platform module, and slide gates formed as generally thin planar blades and sized to be positioned down into the slots to a desired degree, the slide gates each including a top flange for resting against the top of the slot to retain the slide gate in position.

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10. The modular support system of claim 7, wherein the edge closure comprises molded plastic curtain legs at one or more peripheral edges of the bed platform, connected to bottom sides of the bed platform modules in place of bed support legs.

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11. For use in a modular support system for supporting a bed of material through which air is to be passed vertically, the modular support system being made up of a multiplicity of polygonal bed platform modules having generally planar top surfaces and configured to be arranged side by side contiguously to form a bed platform covering a selected area, a series of flow distribution platform modules for positioning among the multiplicity of platform modules, each flow distribution platform module comprising:

a generally horizontal top surface,

support legs connected to the top surface and extending downward to support the flow distribution platform module on a base surface to define a flow distribution channel space under the top surface and extending along a series of end-to-end

similar such flow distribution platform modules,

slots in the flow distribution platform modules, extending downwardly through the generally horizontal top surface, the slots being positioned in generally vertical planes near left and right sides of the modules, and

slide gates configured to be assembled down into the slots and to hang down adjacent to the flow distribution channel space sufficiently to close off the respective sides of the channel space to a desired degree at each side of each flow distribution platform module,

whereby, prior to the placement of a bed of material on a modular bed platform including the flow distribution platform modules, the slide gates can be adjusted to various positions of closure at various positions along the series of such modules to balance a test flow of air or gas entering the flow distribution channel space en route to the remaining space of the modular support system.

12. The apparatus of claim 11, wherein the flow distribution platform modules are substantially rectangular and have four legs, substantially at corner, the legs having vertical grooves forming a part of said slots, such that the slide gate slides down through the upper surface of the flow distribution platform module in said slot and is guided and generally retained by the grooves in the legs.

13. The apparatus of claim 11, wherein the bed platform modules and flow distribution platform modules are formed of rotocast plastic material.

14. The apparatus of claim 11, wherein the slide gates are formed of molded plastic material, shaped generally as thin planar blades with a top flange wide enough to support the slide gate from the top of the slot.

15. A method for erecting a modular support system for supporting a bed of material through which air or gas is to be passed vertically and for balancing the distribution of gas to be passed through the bed of material after the modular support system is fully erected, comprising:

(a) assembling together a multiplicity of polygonal bed platform modules having generally planar top surfaces and shaped to be arranged side-by-side contiguously to form a bed platform covering a selected area, at least some of the bed platform modules having perforations so as to allow gas to pass through the bed platform, with bed support legs having upper ends connected to bottom sides of the bed platform modules, and of length sufficient to support and elevate the bed platform modules above a base surface on which the support system rests to form a plenum under the bed platform modules,

(b) providing a peripheral closure along the periphery of the bed platform,

(c) including in the multiplicity of polygonal platform modules a series of flow distribution platform modules arranging the flow distribution platform modules in a contiguous series in the bed platform, defining in the plenum a flow distribution channel space beneath the series of flow distribution platform modules,

(d) providing a gas inlet opening into the plenum and communicating with the flow distribution channel space,

(e) the flow distribution platform modules having slots in generally vertical planes near left and right sides of the modules, and including slide gates configured to be assembled  
5 down into the slots and to hang down into the plenum sufficiently to close off the respective sides of the flow distribution channel space to a desired degree at each side of each flow distribution platform module,

10 (f) prior to the placement of the bed of material on the modular bed platform, directing air or gas through the gas inlet and into the plenum and into the flow distribution channel space, measuring the flow of gas through the various perforated bed platform modules at various locations, and placing and adjusting  
15 the slide gates in the slots and again measuring the flow of gas until optimum balance of flow through the various bed platform modules is achieved via optimal adjustment of the slide gates and corresponding control of the flow of gas through and out of the sides of the flow distribution channel space at various  
20 locations.